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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,272	05/02/2001	Masaki Watanabe	50090-295	6124

7590 09/02/2003

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EXAMINER

CRUZ, LOURDES C

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 09/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/846,272	Applicant(s) WATANABE ET AL.	
	Examiner Lourdes C. Cruz	Art Unit 2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 1 and 4-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2 and 3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

It has come to the attention of the examiner (after the amendments to the claims due to 112 problems) that even though Applicant points out in the Election of 06/28/02 that the elected Species read on Fig. 3, the elected claim in fact read on Fig. 2 instead. The examiner has carried out examination according to the elected claims.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter that the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites, "said opposite side..." This lacks antecedent basis. See that while claim 2 recites an opposite side for active regions, it does not provide antecedent basis for the above phrase. For the purpose of this office action, the examiner assumes the claim refers to contacts disposed on the active region of the chip, which will be in accordance with the specie recited in claim 2.

Also, the claim recites, "through-type via contacts". While the examiner is aware of the meaning of via, the meaning of contact, and the meaning of through holes in the semiconductor art, the examiner cannot ascertain what the quoted phrase above refers to. For this Office Action the examiner assumes Applicant refers to contacts.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 2 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Wenzel et al. (US 6150724).

Wenzel et al. discloses (see fig. 7):

A semiconductor device comprising a BGA substrate 106 having one principal plane furnished with a large number of solder balls 112; a first semiconductor chip 102 including bumps 110 and active regions (where the bumps are disposed), said bumps and active regions being formed on a first side of the semiconductor chip, said bumps serving as electrodes attached to another principal plane of said BGA substrate (see bumps corresponding to chip are on an opposite surface of substrate than bumps 112); and a first chip capacitor (104; Col. 18, lines 51+) attached to said active regions of said first semiconductor chip or to the opposite side of said active regions (see 104 is opposite the active region of 102 and on it) of said first semiconductor chip 102, said first chip capacitor serving to reduce power source noise.

Wenzel et al. also discloses:

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The semiconductor device according to claim 2 wherein said first semiconductor chip 102 further includes through-type via contacts 108 extending from said active regions to said opposite side in said first semiconductor chip, and said first chip capacitor is electrically connected to said active regions through said through-type via contacts.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure includes Degani et al., Ahn et al., Farooq et al., Chan et al., and Pompeo et al. all disclose packages of chips including passive components such as capacitors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elle Cruz whose telephone number is 703-306-5691. The examiner can normally be reached on M-F 10-6:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Elle Cruz

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Examiner  
Art Unit 2827

  
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